# INDEX

(Prepared by Dr. Robert L. Volle)


Absorption, subcutaneous, 441
  mechanisms, 446
  methods of study, 443
  modification by drugs, 457
Adrenal glucocorticoids, effects on drug absorption, 459
Andersson, B. and Larsson, S. Physiological and pharmacological aspects of the control of hunger and thirst, 1
Antagonists of 5-hydroxytryptamine, 399
  analgesics, 421
  antihistaminic agents, 415
  atropine, 419
  clinical studies, 423
  ergot alkaloids, 408
  local anesthetics, 420
  *d*-lysergic acid diethylamide, 409
  modes of actions, 400
  phenothiazine derivatives, 416
  potency, 423
  selectivity, 404
  sympathomimetic amines, 422
Anticoagulants, 279
  antidotes, 312
  coumarin-indanedione drugs, 314
  heparin, 314
  mode of action, 282
  temperature regulation, effect of, 377
  uses, medical, 285
Anticoagulant therapy, 279
  administration, 308
  control, 314
  indications, 285
Antidiuretic hormone, 250
Antihistaminic agents, effect on drug absorption, 460
Atropine, 18
  antagonism of 5-hydroxytryptamine, 419
  antagonism of muscarine, 475
  intracranial chemoreceptors, 89
  pharmacological denervation, 18
Baer, J. E., *see* Beyer, K. H., 517
Berliner, D. L. and Dougherty, T. F. Hepatic and extrahepatic regulation of corticosteroids, 329
Beyer, K. H. and Baer, J. E. Physiological basis for the action of newer diuretic agents, 517
Botulinum toxin, 27
Carbonic anhydrase, 519
  inhibitors, 526
  role in electrolyte transport, 525
Catecholamines, 85
  antagonist, 5-hydroxytryptamine, 422
  chemoreceptors, intracranial, 85
  subcutaneous drug absorption, 457
  temperature regulation, 377
Central nervous system, 2, 71, 225
  cerebrospinal fluid, 71
  food and water intake, regulation, 2
  intracranial receptors, 71
  neurohypophysial hormones, 265
Chemoreceptors, 71
  intracranial, 71
  peripheral, 83
  stimulating drugs, 83
Cholinomimetics, 376
  chemoreceptors, intracranial, 85
  temperature regulation, 376
Clarkson, T. W., *see* Passow, H., 185
Connective tissue, subcutaneous, 441
  drug absorption, 441
  ground substance, 451
Corticosteroids, hepatic regulation, 329
  biosynthesis, 333
  biotransformation, 334
  hormonal interrelationships, 343
  nomenclature, 331
Cortisol, 347
  gluconeogenesis, 350
  inflammation, 347
  metabolism, 347
  lymphocytokaryorrhexis, 349
Denervation, pharmacological, 17
  botulinum toxin, 27
  ganglionic blocking agents, 24
  parasympathetic blocking agents, 18
  reserpine, 29
Diuretic agents, 517
  acetazolamide, 525
  chlorazanil, 550
  organomercurial, 542, 550
  spirolactones, 548
  subcutaneous drug absorption, 460
  thiazides, 532
  triamterene, 551
Dougherty, T. F., *see* Berliner, D. L., 329
Emmelin, N. Supersensitivity following "pharmacological denervation," 17
Enzyme systems, 190

heavy metals, 190
inhibition kinetics, 191
Estrogens, 346
subcutaneous drug absorption, 458
Euler, C. von. Physiology and pharmacology of temperature regulation, 361
Ganglionic blocking agents, 24
Glucocorticoids, *see* Adrenal glucocorticoids
Gyermek, L. 5-Hydroxytryptamine antagonists, 399
Heavy metals, actions, 185
animals, 211
biochemical substances, 188
cells, 194
enzymes, 190
surface films, 194
Heparin, 314
Hunger, 2
food preferences, 7
hypothalamic control, 2
inhibitory agents, 11
stimulating agents, 10
water intake, relationship, 7
Hyaluronidase, 457
5-Hydroxytryptamine, 399
antagonists, *see* Antagonists of 5-Hydroxytryptamine
receptors, 399
temperature regulation, 387
transport systems, 170
Ingram, G. I. C. Anticoagulant therapy, 279
Larsson, S., *see* Andersson, B., 1
LeFevre, P. G. Sugar transport in the red blood cell: structure-activity relationships in substrates and antagonists, 39
*d*-Lysergic acid diethylamide (LSD), 388, 409
antagonist, 5-hydroxytryptamine, 409
temperature regulation, 388
Muscarine, 465
botanical origin, 466
chemistry, 469
intoxication, 467
pharmacology, 473
Neurohypophysial hormones, 225
chemistry, 227
excretion, 233
metabolism, 226
oxytocin, 235
responses, 250
secretion, 228
structure-activity relationships, 238
vasopressin, 236
Oxytocin, 235
Parasympathetic blocking agents, 18
Passow, H., Rothstein, A. and Clarkson, T. W. The general pharmacology of the heavy metals, 185
Pinocytosis, 114
Renal function, 517
distal tubule, 523
diuresis, 517
glomerulo-tubular imbalance, 518
loop of Henle, 522
proximal tubule, 519
uric acid excretion, 551
Reserpine, 29
pharmacological denervation, 29
temperature regulation, 386
Rosenberg, T., *see* Wilbrandt, W., 109
Rothstein, A., *see* Passow, H., 185
Sawyer, W. H. Neurohypophysial hormones, 225
Schou, J. Absorption of drugs from subcutaneous connective tissue, 441
Structure-activity relationships, 46, 465
carbonic anhydrase inhibitors, 526
muscarine-like compounds, 483
neurohypophysial hormones, 238
sugar-transport, 46
thiazides, 532
Sugar transport, 39
inhibitors, 52, 198
insulin, 133
structure-activity relationships, 46
substrate specificity, 45
Temperature regulation, 361
antipyretics, 380
exercise, 381
fever, 379
homeostatic interactions, 382
hypothalamic control, 372
sudomotor reactions, 366
vasomotor reactions, 361
Thirst, 5
hypothalamic control, 2
inhibitory agents, 12
stimulating agents, 10
Vasopressin, 236
Waser, P. G. Chemistry and pharmacology of muscarine, muscarone and some related compounds, 465
Wilbrandt, W. and Rosenberg, T. The concept of carrier transport and its corollaries in pharmacology, 109
Winterstein, H. The actions of substances introduced into the cerebrospinal fluid and the problem of intracranial chemoreceptors, 71

# PHARMACOLOGICAL REVIEWS

*Editorial Board*

GEORGE B. KOELLE, *Chairman*

GEORGE H. ACHESON
H. BLASCHKO
A. S. V. BURGEN
G. A. H. BUTTLE
ERIK JACOBSEN
SEYMOUR S. KETY
FREDERICK S. PHILIPS
BÖRJE UVNÄS
MARTHE VOGT

VOLUME 13
1961

BALTIMORE, MARYLAND

# CONTENTS


No. 1, March 1961

Physiological and pharmacological aspects of the control of hunger and thirst. Bengt Andersson and Stig Larsson ..... 1
Supersensitivity following "pharmacological denervation." N. Emmelin ..... 17
Sugar transport in the red blood cell: structure-activity relationships in substrates and antagonists. Paul G. LeFevre ..... 39
The actions of substances introduced into the cerebrospinal fluid and the problem of intracranial chemoreceptors. Hans Winterstein ..... 71

No. 2, June 1961

The concept of carrier transport and its corollaries in pharmacology. Walther Wilbrandt and Thomas Rosenberg ..... 109
The general pharmacology of the heavy metals. H. Passow, A. Rothstein and T. W. Clarkson ..... 185
Neurohypophysial hormones. Wilbur H. Sawyer ..... 225
Anticoagulant therapy. G. I. C. Ingram ..... 279

No. 3, September 1961

Hepatic and extrahepatic regulation of corticosteroids. David L. Berliner and Thomas F. Dougherty ..... 329
Physiology and pharmacology of temperature regulation. Curt von Euler ..... 361
5-Hydroxytryptamine antagonists. Laszlo Gyermek ..... 399
Absorption of drugs from subcutaneous connective tissue. Jens Schou ..... 441

No. 4, December 1961

Chemistry and pharmacology of muscarine, muscarone, and some related compounds. Peter G. Waser ..... 465
Physiological basis for the action of newer diuretic agents. Karl H. Beyer and John E. Baer ..... 517